

New Statewide System Tracks Firearm-Related Injuries to Gather Information for Prevention Strategies

Keeping tabs on shootings and firearm fatalities was once largely the province of police and coroners. Now it's also a concern of public health agencies, and Washington is in the vanguard of states developing new systems to track this problem. Firearms are a leading cause of fatal injury in Washington State, second only to motor vehicle crashes. Approximately 700 fatal firearm injuries occur in the state each year, and an additional 500 nonfatal firearm injuries require hospitalization.

Washington, through the Department of Health (DOH), is one of seven states funded by the Centers for Disease Control and Prevention to develop systems for firearm injury surveillance and to conduct analyses to improve understanding of this public health problem. The department recently completed a pilot firearm injury surveillance project in seven counties: Benton, Franklin, King, Pierce, Skagit, Spokane, and Yakima. The system used reports from coroners and medical examiners, hospital emergency departments, and police, along with data from the DOH trauma registry and death certificate data-

base. The preliminary results, gathered from November 1995 through April 1996, provided information about the victims and perpetrators of firearm injuries, severity and intent of injuries, weapon characteristics, and the circumstances of shootings.

Preliminary Findings

Sources in the seven counties participating in the pilot study reported 1,194 firearm injuries. Assault- and suicide-related shootings together accounted for 80% of all firearm injuries, while unintentional shootings accounted for approximately 10% of injuries (table). In 9% of the cases the reports did not mention the circumstances.

Over half of the reported shootings were fatal, compared to a national fatality rate of 28%. The higher proportion of fatalities in Washington probably reflects the fact that the various reporting sources began sending data to the system at different times during the pilot study period. For example, coroners began reporting data early in the study while most hospitals entered the system several months later.

Among nonfatal injuries, the number and proportion of cases discharged from hospital emergency departments is of particular interest because, in the past, all analyses of firearm injuries in Washington have relied on hospital inpatient or death records. This database included 520 nonfatal gunshot injuries; close to 65% were treated and discharged from emer-

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Firearm injuries by intent and severity, pilot surveillance system in seven Washington counties, November 1995 through April 1996

Intent	Severity			Total (%)	
	Discharged from ER	Hospitalized (nonfatal)	Died		
Unintentional	65	37	21	123	(10)
Suicide	13	22	440	475	(40)
Assault	195	86	194	475	(40)
Law enforcement		4	11	15	(1)
Unknown	63	35	8	106	(9)
Total	336	184	674	1194	(100)

The problem of violence is too important just to wait for an answer. We can develop a scientific approach using public health methods to look at possible interventions. When we find the ones that work . . . it is our job to get them into place.

William Roper, M.D.,
Former Director,
Centers for Disease
Control and Prevention

Recommended Reading

Annest JL, et al: National estimates of nonfatal firearm-related injuries: beyond the tip of the iceberg. *JAMA* 1995; 273:1749-54.

Kellerman AL, et al: The epidemiologic basis for the prevention of firearm injuries. *Annu Rev Public Health* 1991; 12:17-40.

Firearm Injuries (from page 1)

gency departments.

The severity of injury varied considerably by category of intent. Close to 93% of the 475 suicide attempts with a firearm were fatal, as were 73% of 15 shootings by police. Fatalities were less common among 475 assault-related shootings (about 41%) and 123 unintentional firearm injuries (17%). Among nonfatal shootings, suicide attempts were the most likely to result in hospitalization, as only 37% of the injured were discharged from emergency departments. By comparison, the discharge rates for assault and unintentional shooting injuries were roughly 69% and 64%, respectively.

The Next Step

The pilot firearm injury surveillance system has been expanded to a statewide system under a DOH reporting requirement that became effective May 1, 1996. All hospital emergency departments, coroners, and medical examiners are now reporting firearm injuries to DOH. In addition, more than 150 law enforcement agencies are voluntarily reporting firearm injuries.

The preliminary results reported here are not representative of state trends because they cover only seven counties for a limited time. Also, the results may be somewhat inaccurate given the variable completeness and duration of reporting by different sources. The study demonstrated, however, that monitoring nonfatal firearm injuries through hospitalization records alone would undercount these injuries by nearly 65%, and that this undercount would significantly affect estimates of unintentional and assault-related firearm injuries.

Future reports, based on more uniform reporting throughout the state and from all sources, will be more representative and useful and should provide more detailed information about the circumstances surrounding shootings. This information will be used to identify a wide range of promising prevention strategies such as promotion of improved safety devices on firearms and reduced access to guns by youth and persons determined to be at high risk for suicide. The surveillance system also will allow us to monitor progress toward firearm injury reduction.

For more information, please contact the DOH Noninfectious Disease and Injury Prevention Program at 360-586-5693.

Active Cases of Tuberculosis Increase Slightly in 1996

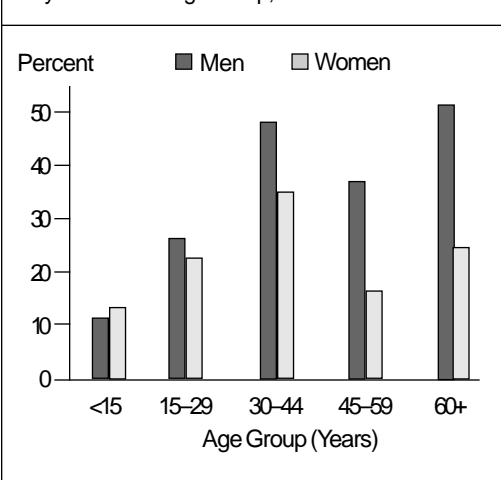
Cases of active tuberculosis (TB) in Washington increased slightly in 1996, with reports of 285 cases compared to 278 in 1995. Twenty-six of 39 counties reported at least one new case of TB last year. However, only six counties had 10 or more cases, and those six contributed nearly 80% of the cases in the state. TB disproportionately affects men, who accounted for 61% of the 1996 cases; after age 45, men with TB outnumbered women by more than two to one.

The demographics of TB are changing. Once considered primarily a disease of the elderly, TB now has a broader distribution in younger age groups (figure). In 1996, almost half of cases (124) occurred among persons less than 40 years of age, and 16 occurred in children less than 5 years old. As more people arrive in Washington from countries where TB is endemic, we will continue to see a rising incidence of TB in younger persons. Only 12 new cases of TB were diagnosed among persons with AIDS in 1996, which in part indicates the effectiveness of state and local TB screening and prevention programs aimed at this population.

TB among foreign-born populations presents the biggest challenge for disease control in Washington. Fifty-nine percent of the new cases of TB in 1996 occurred among persons born outside the United States, up from 55% the previous year.

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Washington State Cases of Active Tuberculosis by Gender and Age Group, 1996



Monthly Surveillance Data by County

February 1997* – Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Chlamydia	Gonorrhea	AIDS	Pesticides†	Lead‡
Adams	0	0	0	0	0	0	0	0	0	0	0	0	0	0/#
Asotin	0	0	0	0	0	0	0	0	0	2	0	3	0	0/#
Benton	0	0	0	1	3	0	0	0	0	13	1	0	0	0/20
Chelan	0	0	0	0	0	1	0	0	0	15	1	0	0	2/80
Clallam	0	0	0	0	0	0	0	1	0	1	2	0	0	0/0
Clark	1	3	0	5	3	0	3	2	1	33	6	4	0	0/#
Columbia	0	0	0	0	0	0	0	0	0	2	0	0	0	0/0
Cowlitz	0	0	0	0	0	0	0	1	0	6	1	0	0	1/15
Douglas	0	0	0	0	0	0	0	0	0	5	0	0	0	0/0
Ferry	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Franklin	0	2	0	0	0	0	0	0	0	11	1	0	0	0/6
Garfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Grant	0	3	0	0	0	0	0	0	0	22	1	0	0	0/5
Grays Harbor	0	3	0	0	0	0	0	0	0	8	1	1	1	0/0
Island	0	0	0	0	0	0	2	0	0	6	1	1	0	0/0
Jefferson	0	0	0	0	0	0	0	0	0	2	0	0	0	0/#
King	0	14	5	19	0	0	0	16	9	265	69	24	3	0/30
Kitsap	0	3	0	8	0	0	2	0	0	28	3	2	0	0/27
Kittitas	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Klickitat	0	0	0	0	0	0	0	0	0	3	0	0	0	0/0
Lewis	0	1	0	0	0	0	0	0	0	5	0	0	0	0/#
Lincoln	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Mason	0	0	0	1	0	0	0	1	0	6	0	0	0	0/0
Okanogan	0	0	0	1	0	1	0	0	0	6	1	0	0	0/#
Pacific	0	0	0	0	0	0	0	0	1	1	0	0	0	0/#
Pend Oreille	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Pierce	0	3	0	7	0	1	2	1	4	127	46	9	0	0/110
San Juan	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Skagit	0	1	0	3	1	0	0	1	0	4	0	0	0	0/#
Skamania	0	0	0	0	0	0	0	0	0	2	0	0	0	0/0
Snohomish	0	3	1	9	0	0	0	0	1	48	10	11	2	1/10
Spokane	0	1	1	2	0	0	0	0	0	58	34	1	1	1/26
Stevens	0	0	0	0	0	0	0	0	0	2	1	0	0	0/0
Thurston	0	1	0	10	0	0	0	2	0	12	1	1	1	0/#
Wahkiakum	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Walla Walla	0	0	0	0	0	0	0	0	0	10	0	0	0	0/13
Whatcom	0	0	0	0	1	0	0	5	0	6	0	2	0	0/#
Whitman	0	1	0	2	0	0	0	1	0	1	1	0	0	0/#
Yakima	0	19	6	3	0	0	1	0	0	40	6	4	2	3/20
Unknown														0/3

Current Month	1	58	13	71	8	3	10	31	16	753	187	63	10	8/388
February 1996	3	42	15	72	10	12	10	7	18	785	170	58	?	13/304
1997 to date	2	64	16	80	8	3	17	35	42	1555	383	112	16	23/648
1996 to date	4	53	26	94	15	14	15	10	38	1672	438	108	?	23/645

* Data are provisional based on reports received as of February 28, unless otherwise noted.

† Unconfirmed reports of illness associated with pesticide exposure.

‡ Number of elevated tests (data include unconfirmed reports) / total tests performed (not number of children tested); number of tests per county indicates county of health care provider, not county of residence for children tested; # means fewer than 5 tests performed, number omitted for confidentiality reasons.



WWW Access Tips

Information about national firearm injuries is available from the Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, at: <http://www.cdc.gov/ncicp/dvp/facts.htm>

1997 Summer Institute for Public Health Practice

The 1997 Summer Institute sponsored by the Northwest Center for Public Health Practice is scheduled for July 21 to August 1. More information is available on the center's Web page at: <http://weber.washington.edu/~nwcpdp/dates/htm> or call 206-720-4250.

Rabies Confirmed as Cause of Mason County Death

Health officials are investigating the rabies death of a 65-year-old Mason County man, the second person in Washington to die of rabies since 1939. After he became ill in late December, the man was first hospitalized in Thurston County and later transferred to King County, where he died in mid-January. Tissue samples analyzed by the Centers for Disease Control and Prevention in Atlanta confirmed the diagnosis of rabies on February 28. The only known reservoir of rabies in Washington is bats, but family members could not recall any exposure incident. As a precautionary measure, the man's wife and a limited number of medical personnel who had close contact with him are receiving rabies vaccination and rabies immune globulin prophylaxis.

Human rabies is extremely rare in the United States, and virtually all recent cases have been linked to bats. A 4-year-old Lewis County girl died in 1995 after exposure to a bat that entered her bedroom. Advice to the public should include warnings to avoid touching or feeding wild animals and the need to contact a health care provider or local health department if exposed to a bat or possibly rabid animal. Dogs and cats should be immunized.

State law prohibits importation of wildlife species (e.g., foxes, raccoons) that may carry the disease. Travelers should be aware that rabies is more common in many other countries and that unvaccinated outdoor dogs and cats may be a source of exposure.

Update On Ordering PACE Materials

The lead article in the February issue of *epiTRENDS* mentioned the availability of provider-based materials for the promotion of physical activity. These materials from the Physician Assessment and Counseling for Exercise (PACE) project can be ordered from San Diego State University by calling 619-594-5949. The PACE manual is \$38.50 while a starter kit including the manual, assessment and protocol forms, and chart stickers is \$83. More information is available on the PACE home page: <http://shs.sdsu.edu/PACE>

1996 TB Cases (from page 2)

Preliminary data suggest that the mean length of U.S. residence before developing active TB is 7.5 years. It is not known whether these persons entered the country with TB infection or became infected after arrival. The state TB Control Program has begun to study this important issue.

A change in state regulations that went into effect in December 1996 requires reporting of TB cases within one day of diagnosis rather than five days.

221 Measles Cases Reported in B.C.

As of March 4, the measles epidemic centered around Simon Fraser University near Vancouver totaled 221 cases. No new cases have occurred at SFU since late February. British Columbia health authorities also reported a concurrent mumps outbreak.

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